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SHORT COMMUNICATION

Ptilotus benlii (Amaranthaceae), a new species from Western Australia

Ptilotus benlii R.W.Davis & T.Hammer, *sp. nov.*

Type: 15 km east along Northampton – Port Gregory Road from junction of Yerina Springs Road, *c.* 20 km north-west of Northampton, Western Australia, 3 October 2005, *R. Davis* 10952 (*holo*: PERTH 07200773; *iso*: CANB).

Ptilotus sp. Northampton (R. Davis 10952), Western Australian Herbarium, in *FloraBase*, https://florabase.dpaw.wa.gov.au/ [accessed 22 February 2017].

Erect *perennial herbs* to 45 cm high. *Stems* arising from an underground woody rootstock, terete, ribbed, glabrous, or rarely with very sparse, ascending, nodose hairs. *Cauline leaves* narrowly oblanceolate, 10–60 mm long, 1–4 mm wide, glabrous. *Inflorescences* terminal, spiciform, cylindrical, 20–48 mm long, (25–)28–34 mm wide, white-green. *Bracts* ovate, 5.5–7.1 mm long, 3–3.2 mm wide, transparent, glabrous; apex mucronate (mucro 0.3–0.5 mm long). *Bracteoles* broadly ovate, 5.5–7.7 mm long, 3.8–5 mm wide, transparent, with sparse, nodose hairs along midrib; apex mucronate (mucro 0.3–0.5 mm long). *Tepals* narrowly lanceolate, slightly in-rolled, 13–16 mm long, 1.1–1.8 mm wide; apex entire, green; outer surface with long, silky, nodose hairs to 5 mm long, apex glabrous; inner tepals with marginal woolly hairs at the base of the inner surface to 4 mm long. *Fertile stamens* 5; *filaments* 6.3–7 mm long, uneven, dilated towards the base, pink; *anthers* 1–1.5 mm long, 0.5–0.6 mm wide, pink. *Staminal cup* 2–2.1 mm long, symmetrical, lobed. *Staminal cup appendages* 2–2.3 mm long, 0.4–0.6 mm wide, with sparse hairs on both surfaces. *Ovary* obconical, 1.1–1.2 mm long, 1.1–1.3 mm wide, glabrous. *Stipe* 1–1.2 mm long. *Style* straight, 5.5–7.3 mm long, centrally fixed to ovary. *Stigma* capitate. *Seed* not seen. (Figure 1)

Diagnostic features. *Ptilotus benlii* may be distinguished from all other members of the genus by the following combination of characters: an erect, perennial herb; large, white-green spikes, 28–35 mm wide; five, pink stamens with staminal cup appendages.

Other specimens examined. WESTERN AUSTRALIA: track W of rail-line, 600 m S of Canna, 16 Oct. 2013, *G. Byrne* 589 (PERTH); junction of Chandler-Nungarin Road and Talgomine-Reserve Road, 8 Nov. 2014, *R. Davis* 12505 *& K.R. Thiele* (PERTH); 18 km S of Youanmi, 22 Nov. 1978, *H. Demarz* D 7256 (CANB, PERTH); Garth Kowald's Avenue, 2 km E of Mullewa Shire boundary, Tardun, 13 Oct. 2007, *J. Docherty* 453 (PERTH); Ellendale Road, 3.5 km S of Ramsay Road, E of Greenough, 5 Dec. 2005, *M. Hislop* 3550 (PERTH); northern end of Hutt Lagoon, NE of Port Gregory, 6 Nov. 2008, *G.J. Keighery* 17476 (PERTH); Lot 3157, Isseka Road East, Northampton, 25 Oct. 1999, *I.B. Shepherd* 198 (PERTH).

Phenology. Flowering from mid-spring to late spring. Fruiting from late spring to early summer.

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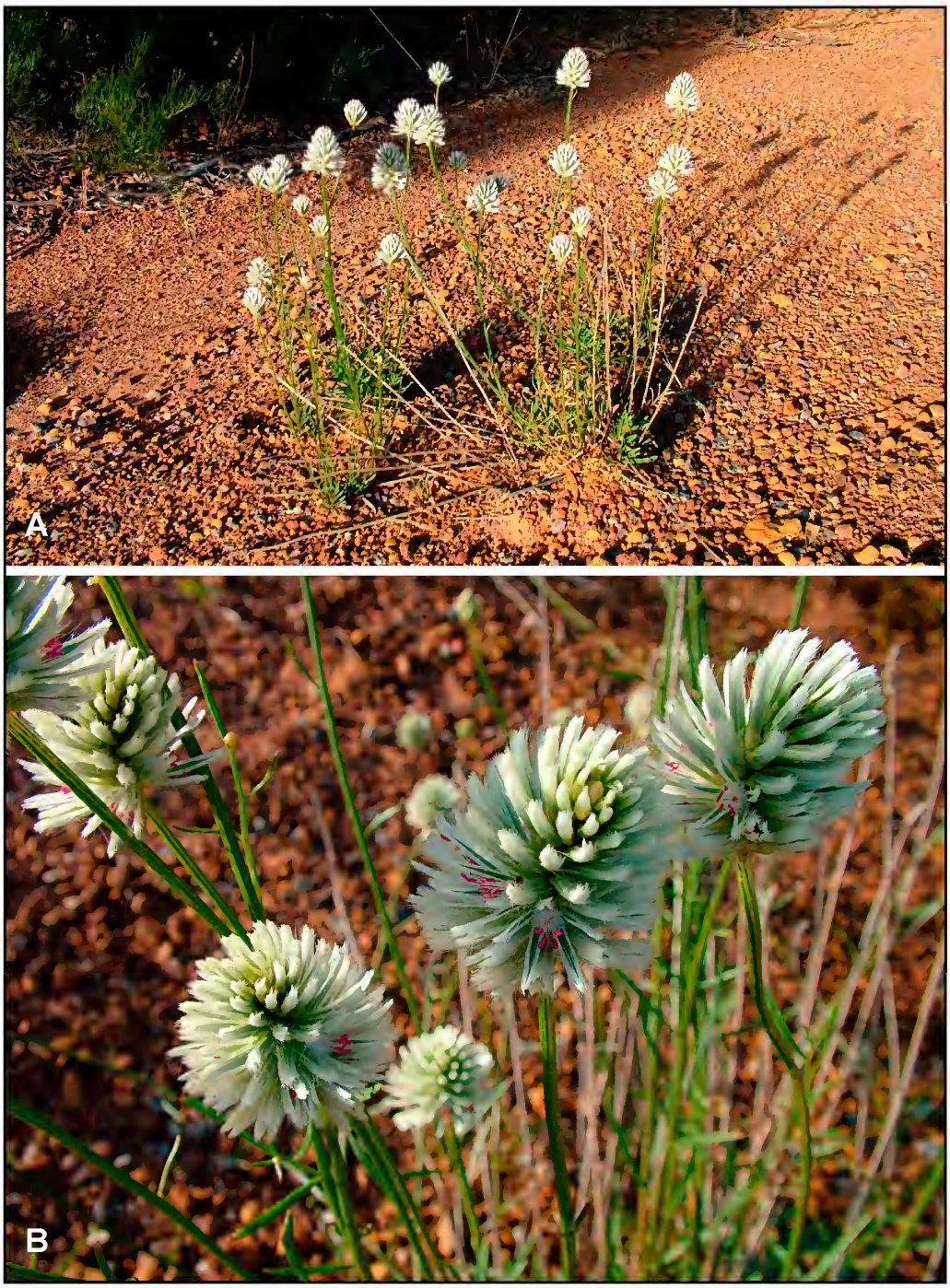

Figure 1. *Ptilotus benlii*. A – flowering plant *in situ* showing the erect habit and green-white flowers; B – flower, showing the characteristic pink filaments and anthers. Images from *R. Davis* 10952. Photographs by R. Davis.

Distribution and habitat. *Ptilotus benlii* occurs from west of Northampton, south-east to Nungarin in the central wheat-belt, and east to the Murchison bioregion near Youanmi Station, 125 km south-east of Mt Magnet (Figure 2). It is often found growing on red or yellow clayey sands in open *Acacia* scrub with *A. rostellifera* or in open mallee woodlands.

Conservation status. *Ptilotus benlii* can be found over a wide area on a range of habitats and appears not to be under any immediate threats; however, it is under-collected to the far east and south-east of its range.

Etymology. The epithet acknowledges the significant contribution of German botanist Gerhard Benl (1910–2001) to the taxonomy of *Ptilotus* R.Br. His work on the genus spanned 40 years, during which time he described upwards of 30 species and numerous infraspecific taxa, and prepared a draft manuscript for the genus for *Flora of Australia*.

Notes. The chloroplast *matK* and nuclear ITS markers have been sequenced for *P. benlii* for a forthcoming PhD thesis (Hammer, in prep.). A preliminary phylogeny including this species has placed it as sister to *P. esquamatus* (Benth.) F.Muell., in a basal position to the '*P. drummondii* clade' (including *P. drummondii* (Moq.) F.Muell., *P. schwartzii* Tate, *P. aphyllus* Benl and *P. calostachyus* F.Muell.). *Ptilotus benlii* shares the character of staminal cup appendages with these species, but can be readily distinguished based on its larger, green-white flowering spikes and bright pink filaments and stamens. *Ptilotus esquamatus* differs from *P. benlii* in having pink spikes, bright orange staminal cup nectaries, and in lacking staminal cup appendages. All other species in this group have pink flowers, or if green, then much smaller spikes.

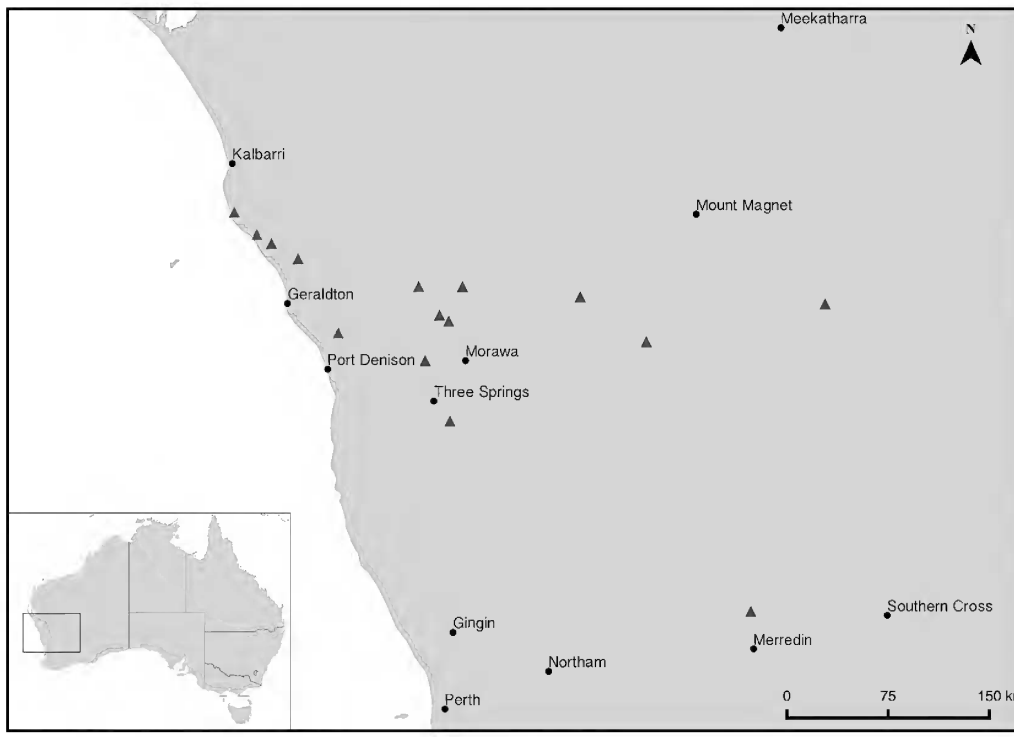

Figure 2. Distribution of *Ptilotus benlii* (▲) in Western Australia.

Acknowledgements

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